



Alberta **Regional** Consortia

# L'énergie dans mon monde : Forces et mouvements

Session 5 - Énergie

3e année

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Ted Zarowny

Chris Zarski

# Aujourd'hui...



**01** Aspects du mouvement :  
Première loi de Newton

**02** Les forces peuvent avoir un effet sur  
les propriétés et mouvements des  
objets.

**03** Les machines simples!



## **Définition : Force- Nouveau Learn AB**

Une force est une poussée ou une traction sur un objet résultant d'une interaction avec un autre objet.

## **Définition : Force**

Une force est ce qui permet de déplacer un objet, de modifier sa trajectoire, ou de la modifier si celui-ci est modifiable.



# Définition : La 1<sup>e</sup> loi de Newton

Un objet qui ne bouge pas reste immobile jusqu'à ce qu'une force le fasse bouger, et un objet qui bouge continuera à bouger jusqu'à ce qu'une force l'arrête.



## La première loi de Newton

Un objet au repos reste au repos...



Sauf si une force externe et non équilibrée agit sur lui..



La balle continue en ligne droite jusqu'à ce qu'elle rencontre un mur, une autre personne ou quelque chose de suffisamment résistant pour qu'elle retombe sur terre, immobile.



# Définition : La 1e loi de Newton ou le principe de l'inertie

Première loi de Newton sur le mouvement

Force déséquilibrée



objet au repos

CLANG!!

Force déséquilibrée



objet n'est plus au repos ACK!



Une bonne introduction jusqu'à 7:00 minutes

## Expériences: Force appliqué et force élastique



**Billes**  
**sciences**

#39 - Les objets roulants

# Une expérience:les forces



# Mission sciences 3e- Les forces

Mission 1 & 2 alignées au curriculum

Mission 3 Systèmes de la terre



MATIÈRE ET ÉNERGIE

*Les forces et le mouvement*

## Notes pédagogiques

# Forces de contact



Appliquées

Forces  
externes et  
internes



Friction  
Une  
expérience  
Glissements  
d'objets



Tension

La surface de  
l'eau  
une expérience



Élastique ou  
ressort

11 Exemples :  
Forces élastiques



Quelles sont les autres façons de tester la force d'un objet ?

Qu'est-ce qui pourrait nous aider à faciliter l'application de la force ?

# Expérimenter la poussée et la traction, la force et le mouvement



Parlons sciences

*Plusieurs unités à découvrir*



Alberta Regional Consortium



# LES MACHINES SIMPLES:

## LE LEVIER

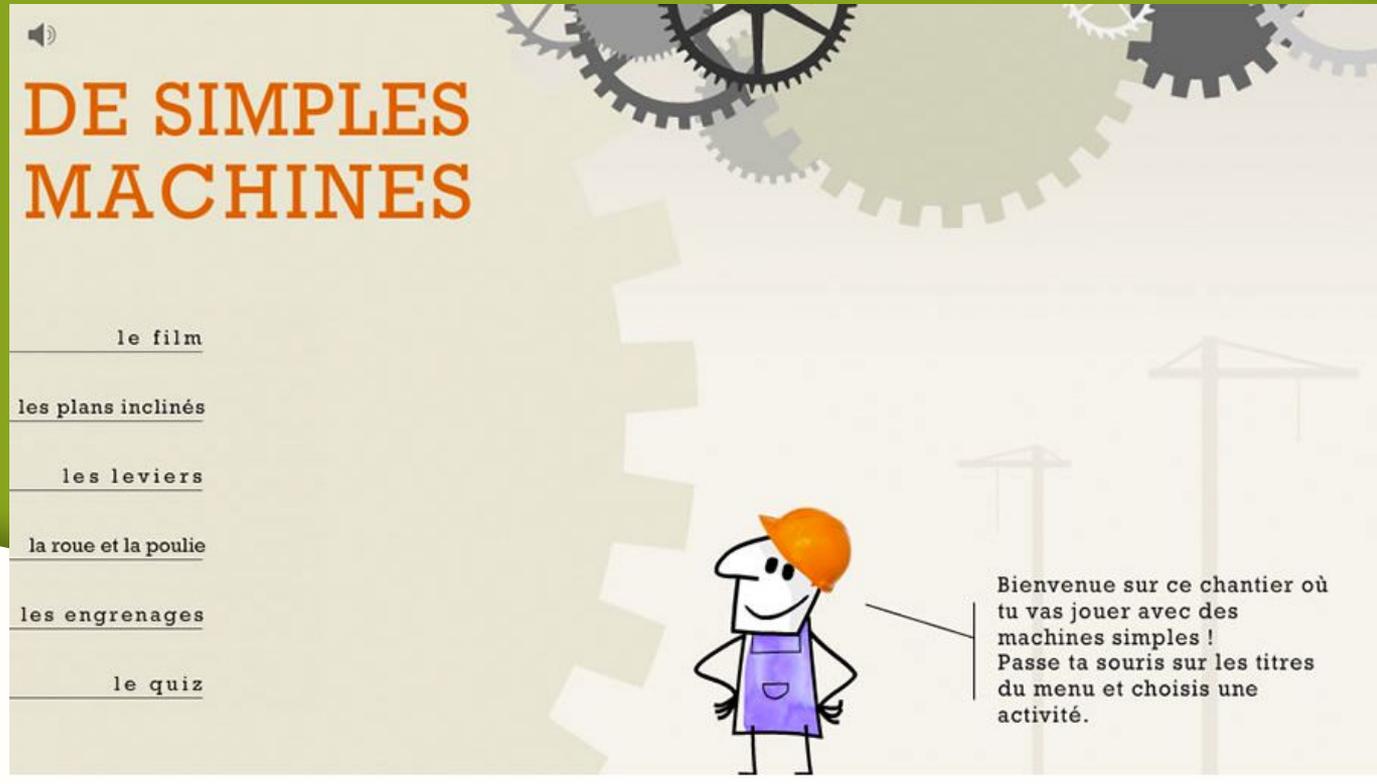
alloprof

Science Nord  
Vidéo & plan de leçon



**Plan ici**

# Plusieurs activités ludiques & vidéo



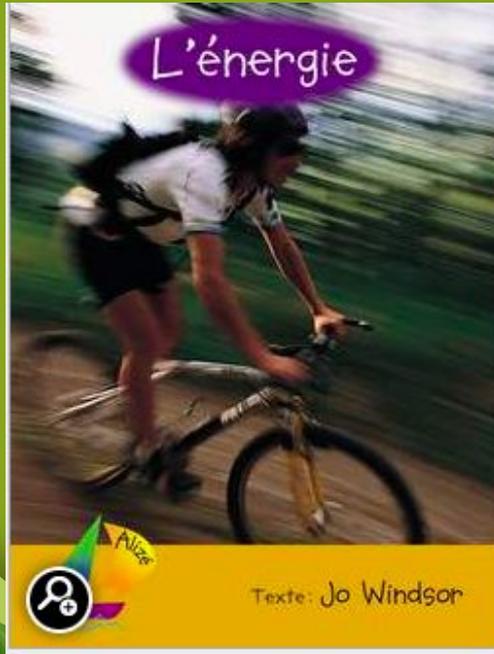
DE SIMPLES MACHINES

- [le film](#)
- [les plans inclinés](#)
- [les leviers](#)
- [la roue et la poulie](#)
- [les engrenages](#)
- [le quiz](#)

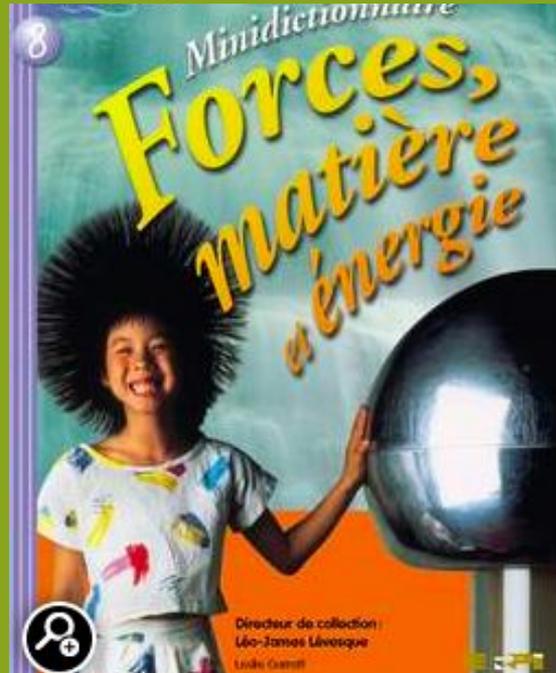
Bienvenue sur ce chantier où tu vas jouer avec des machines simples !  
Passe ta souris sur les titres du menu et choisis une activité.

The screenshot shows a website interface with a light beige background. At the top, there are several interlocking gears in shades of grey and black. Below the gears, a cartoon character of a person wearing an orange hard hat and a purple apron stands with hands on hips. To the right of the character is a speech bubble containing the text: 'Bienvenue sur ce chantier où tu vas jouer avec des machines simples ! Passe ta souris sur les titres du menu et choisis une activité.' On the left side of the page, there is a vertical menu with six items, each underlined: 'le film', 'les plans inclinés', 'les leviers', 'la roue et la poulie', 'les engrenages', and 'le quiz'. A small speaker icon is visible in the top left corner of the page.

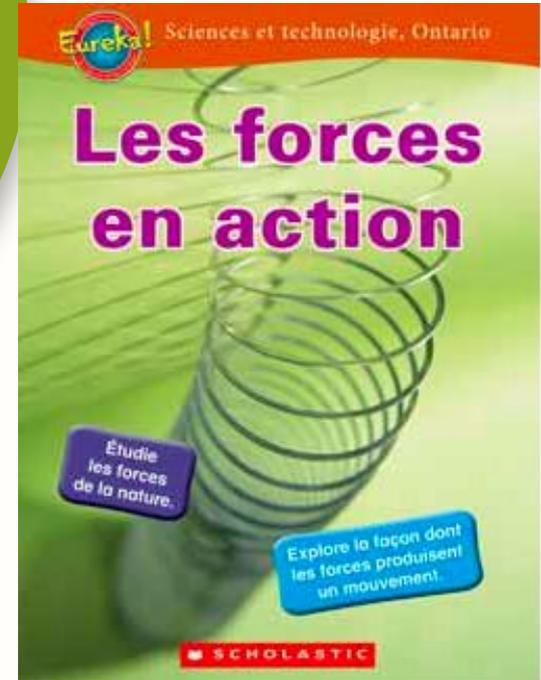
# Ressources de livres possibles to consider



ERPI-Pearson - Série Alizé  
Series



Léo-James Lesvesque  
Petits curieux



Scholastic  
Paquet de 10

# Merci!

**Avez-vous des questions ?**

Marylou Gammans

**[Marylou.Gammans@ARPDC.ab.ca](mailto:Marylou.Gammans@ARPDC.ab.ca)**

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# Contents of this template



You can delete this slide when you're done editing the presentation

Fonts	To view this template correctly in PowerPoint, download and install the fonts we used
Used and alternative resources	An assortment of graphic resources that are suitable for use in this presentation
Thanks slide	You must keep it so that proper credits for our design are given
Colors	All the colors used in this presentation
Icons and infographic resources	These can be used in the template, and their size and color can be edited
Editable presentation theme	You can edit the master slides easily. For more info, click <b>here</b>

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# Table of contents



**01**

## **Section**

You can describe the topic of the section here

**02**

## **Section**

You can describe the topic of the section here

**03**

## **Section**

You can describe the topic of the section here

**04**

## **Section**

You can describe the topic of the section here



# Whoa!

This can be the part of the presentation where you introduce yourself, write your email...



# 01

## Name of the section

You can enter a subtitle here if you need it



# Do you need a longer text?

Mercury is the closest planet to the Sun and the smallest one in the entire Solar System. This planet's name has nothing to do with the liquid metal, since Mercury was named after the Roman messenger god. Despite being closer to the Sun than Venus, its temperatures aren't as terribly hot as that planet's. Its surface is quite similar to that of Earth's Moon, which means there are a lot of craters and plains

Speaking of craters, many of them were named after artists or authors who made significant contributions to their respective fields. Mercury takes a little more than 58 days to complete its rotation, so try to imagine how long days must be there! Since the temperatures are so extreme, albeit not as extreme as on Venus, and the solar radiation is so high, Mercury has been deemed to be non-habitable for humans



# The slide title goes here!

Do you know what helps you make your point crystal clear? Lists like this one:

- They're simple
- You can organize your ideas clearly
- You'll never forget to buy milk!

And the most important thing: the audience won't miss the point of your presentation



# Maybe you need to divide the content



## Mercury

Mercury is the closest planet to the Sun and the smallest one in the Solar System—it's only a bit larger than the Moon



## Venus

Venus has a beautiful name and is the second planet from the Sun. It's hot and has a poisonous atmosphere



# Here are three important ideas



## Mercury

Mercury is the closest planet to the Sun and the smallest of them all



## Venus

Venus has a beautiful name and is the second planet from the Sun



## Mars

Despite being red, Mars is actually a cold place. It's full of iron oxide dust

# Divide the content in four ideas



## Mars

Mars is actually a very cold place



## Venus

Venus has extremely high temperatures



## Jupiter

Jupiter is the biggest planet of them all



## Saturn

Saturn is a gas giant and has several rings



# Reviewing concept is a good idea



## Mars

Mars is actually a very cold place



## Venus

Venus has extremely high temperatures



## Neptune

Neptune is the farthest planet from the Sun



## Mercury

Mercury is the closest planet to the Sun



## Saturn

Saturn is a gas giant with several rings



## Jupiter

Jupiter is the biggest planet of them all



# Awesome words



“This is a quote, words full of wisdom that someone important said and can make the reader get inspired.”

–Someone Famous



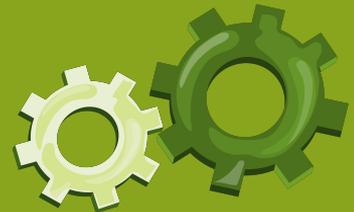
A picture is worth  
a thousand words





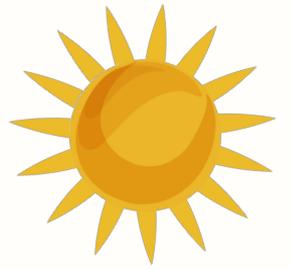
# A picture always reinforces the concept

Images reveal large amounts of data, so remember: use an image instead of a long text. Your audience will appreciate it



# 98,300,000

Big numbers catch your audience's attention





**9h 55m 23s**

Jupiter's rotation period

**333,000**

The Sun's mass compared to Earth's

**386,000 km**

Distance between Earth and the Moon



# Let's use some percentages

25%



## Mars

Despite being red, Mars is actually a cold place. It's full of iron oxide dust

50%



## Mercury

Mercury is the closest planet to the Sun and the smallest of them all

75%



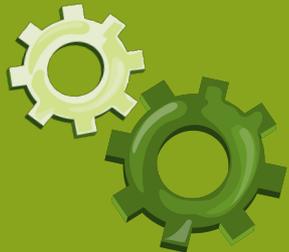
## Venus

Venus has a beautiful name and is the second planet from the Sun



# Computer mockup

You can replace the image on the screen with your own work. Just right-click on it and select "Replace image"





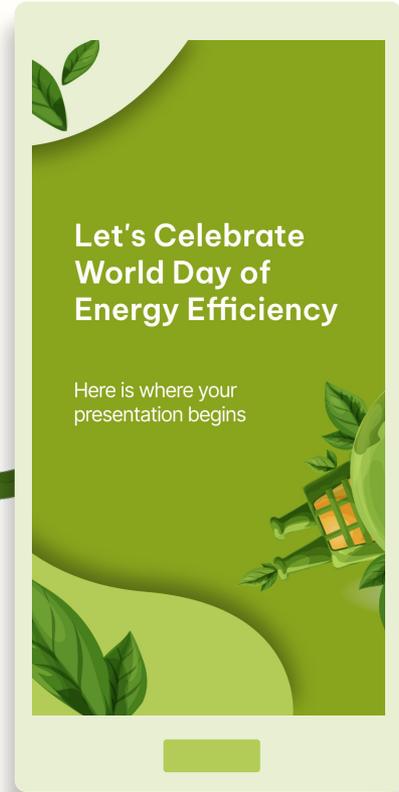
## Tablet mockup

You can replace the image on the screen with your own work. Just right-click on it and select "Replace image"



# Phone mockup

You can replace the image on the screen with your own work. Just right-click on it and select "Replace image"



# This is a map



## Venus

Venus is the second planet from the Sun



## Mercury

Mercury is the closest planet to the Sun



## Mars

Despite being red, Mars is a very cold place



# Home energy efficiency checklist



	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Mercury is very small	Yes	Yes	No	No	No	No	No
Venus is a hot planet	No	No	Yes	No	Yes	Yes	Yes
We all live on Earth	No	No	Yes	No	No	No	No
Jupiter is a gas giant	Yes	No	No	Yes	Yes	No	No

● Yes ● No

# You can use an infographic



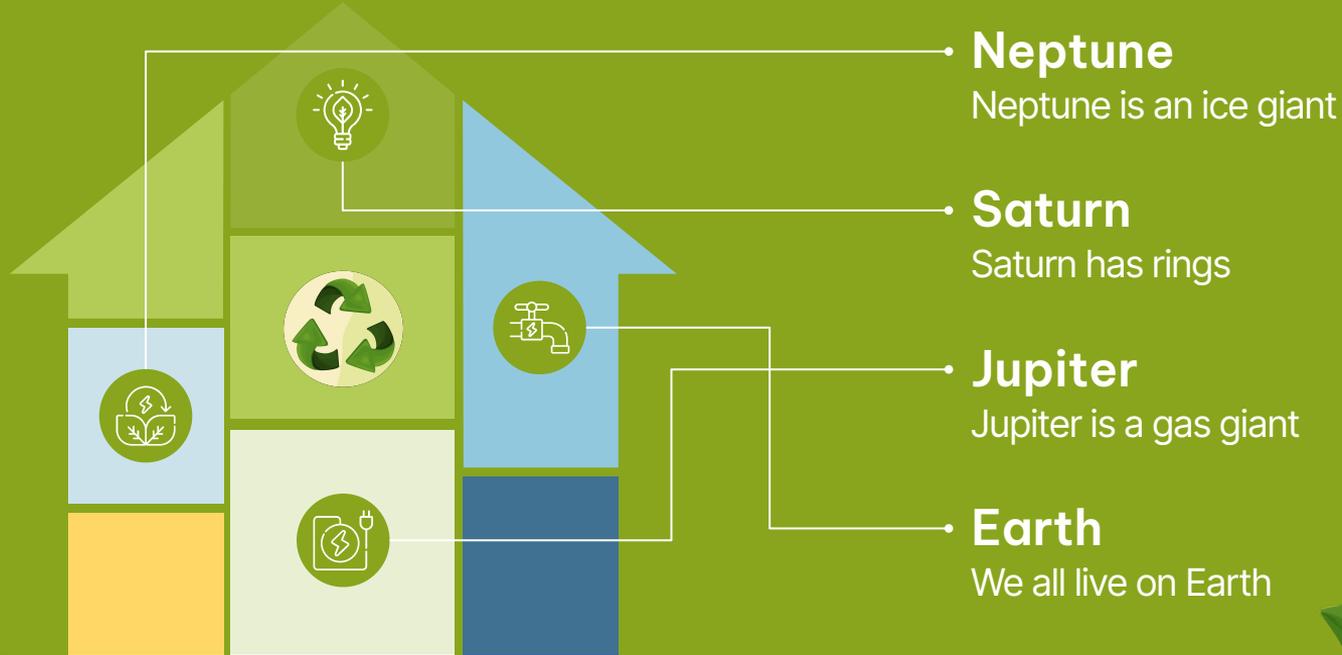
# Tables represent your data



	Times	Yes/No	Notes
Activity 1	08:30 am	Yes	Mercury
Activity 2	11:30 am	No	Venus
Activity 3	3:00 pm	Yes	Earth
Activity 4	7:00 pm	Yes	Mars



# Energy efficiency tips



# Sustainable goals calendar



Get on bike



Recycle



Save water

Mon	Tue	Wed	Thu	Fri	Sat	Sun
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



# Who cares about energy efficiency?

## Gender



Feminine



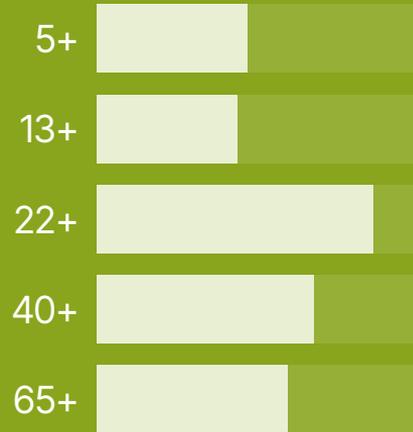
Masculine



Other

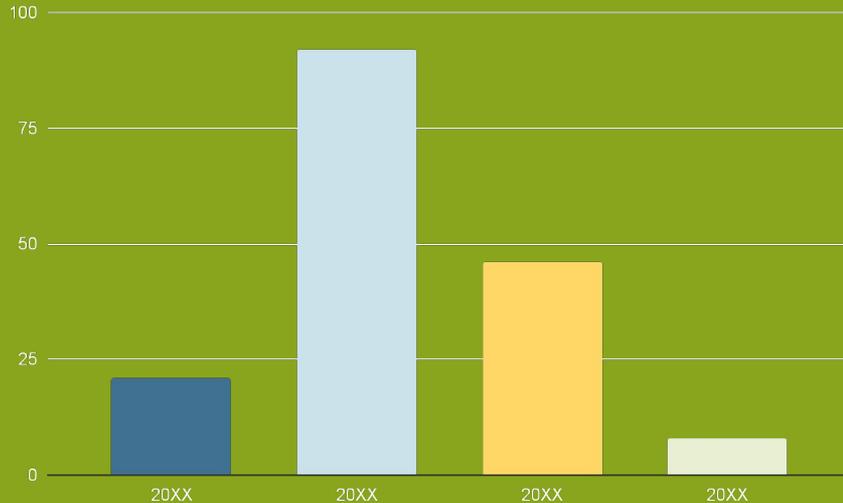
Despite being red, Mars is actually a cold place. It's full of iron oxide dust

## Age





# You can use this graph



Follow the link in the graph to modify its data and then paste the new one here. **For more info, click here**

## Mars

Mars is actually a very cold place

## Venus

Venus has extremely high temperatures

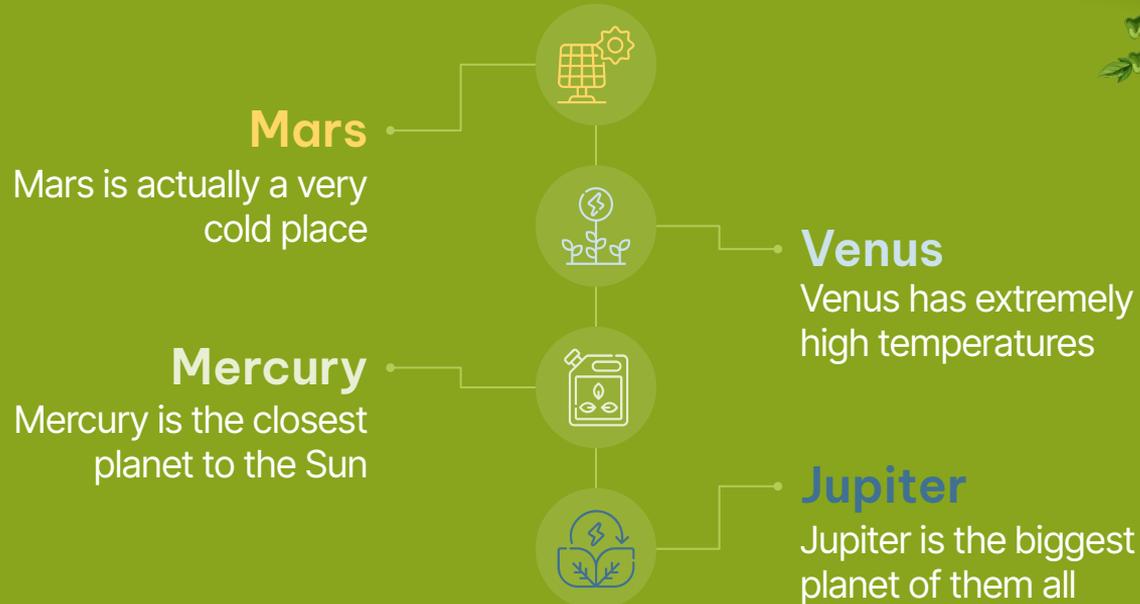
## Jupiter

Jupiter is the biggest planet of them all

## Saturn

Saturn is a gas giant and has several rings

# You can use an infographic



# You can use this graph



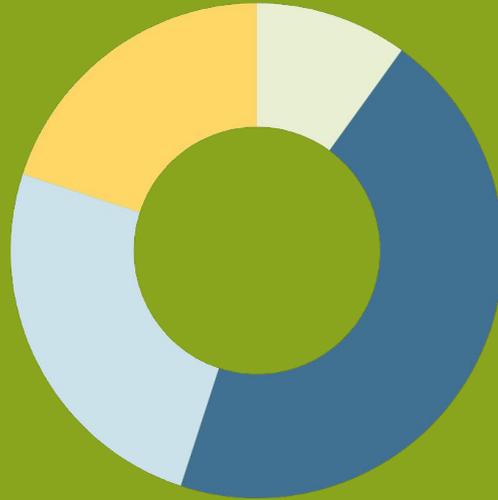
**20%**  
**Mars**

Despite being red,  
Mars is a very  
cold place



**25%**  
**Jupiter**

Jupiter is the  
biggest planet of  
them all



**10%**  
**Venus**

Venus is the  
second planet  
from the Sun



**45%**  
**Mercury**

Mercury is the  
closest planet to  
the Sun

Follow the link in the graph to modify its data and then paste  
the new one here. **For more info, click here**

# Dos and don'ts



## Dos

Mercury is a small planet

Venus has a toxic atmosphere

Earth is the planet with life

Mars is made of basalt



## Don'ts

Jupiter is a huge gas giant

Saturn is a gas giant with rings

Neptune is an ice giant

The Moon is a natural satellite



# Our team



**Jenna Doe**

You can speak a bit  
about this person here



**Timmy Jimmy**

You can speak a bit  
about this person here

# Icon pack



# Alternative resources

Here's an assortment of alternative resources whose style fits the one of this template:

- Green ecology icons set



# Resources

Did you like the resources on this template? Get them for free at our other websites:

## Vectors

- Ecology design concept set
- Happy earth day banner template
- Happy earth day web template
- Happy earth day horizontal banner
- Happy earth day poster template
- Vector hand drawn abstract shapes collection

## Icons

- Icon Pack: Sustainable Energy | Flat

## Photos

- 3d house with solar pannels
- Wind farms fields I
- Wind farms fields II
- Portrait of a beautiful woman engineer





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#88a51d

#b2cc57

#e9efd3

#cbe2eb

#92c8dd

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#ffd766

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Pana



Amico



Bro



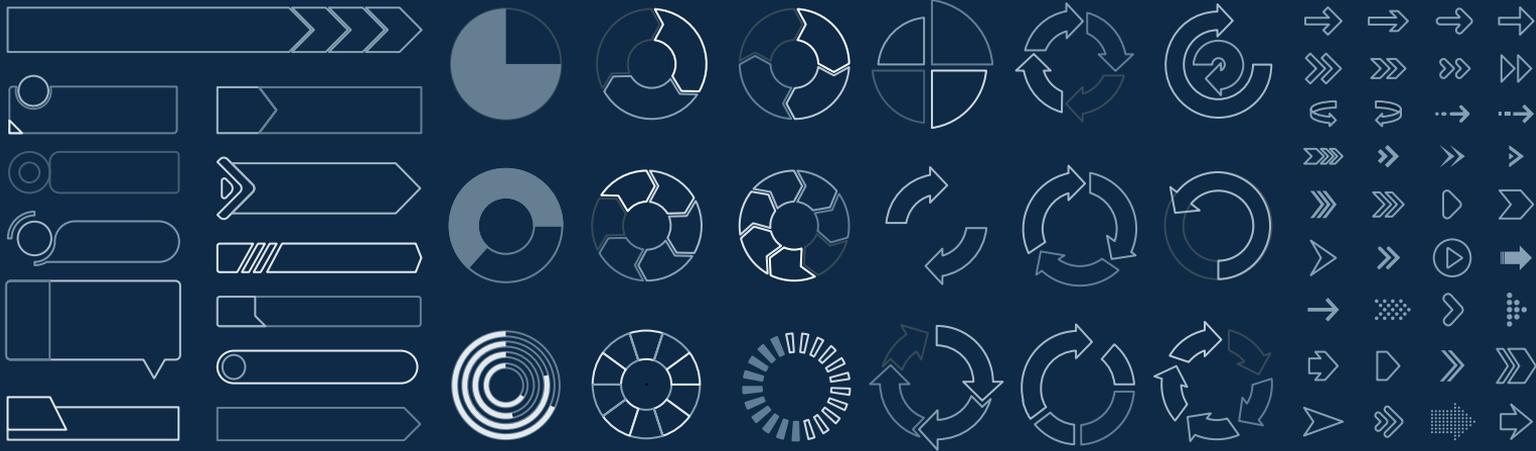
Rafiki



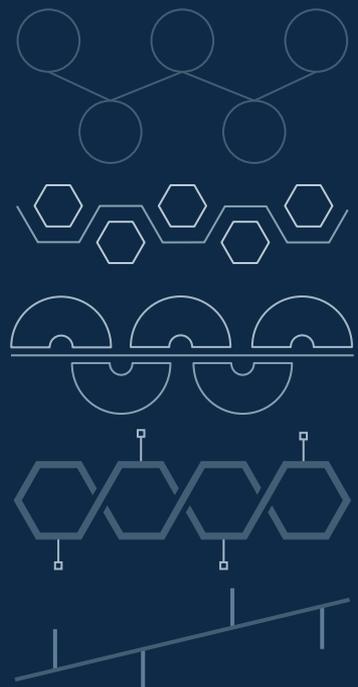
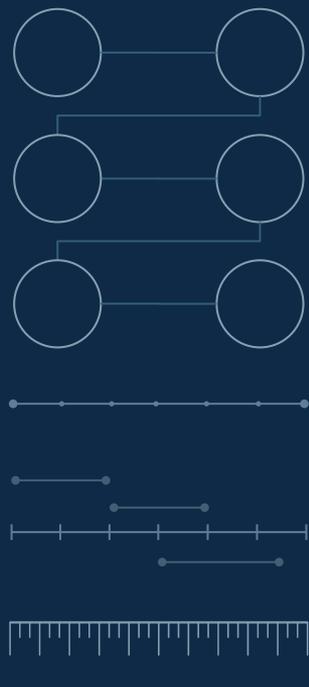
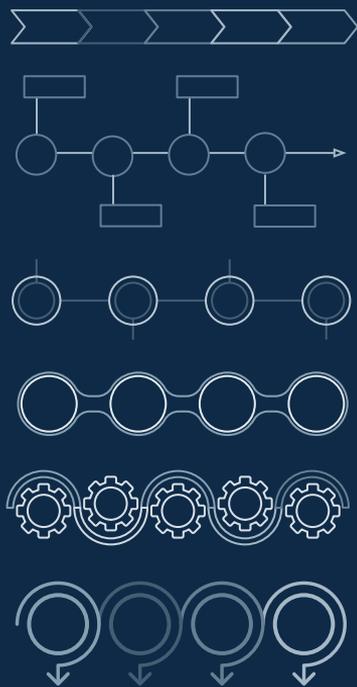
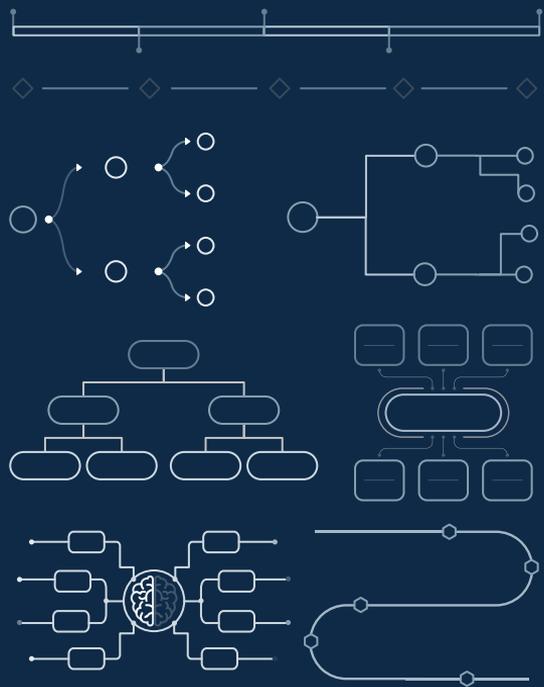
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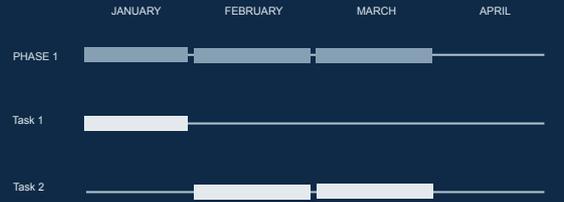
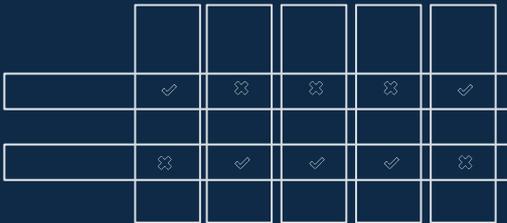
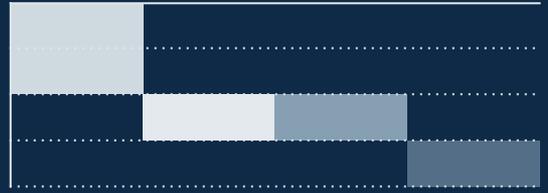
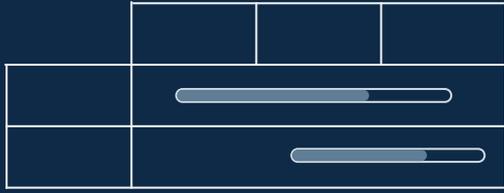
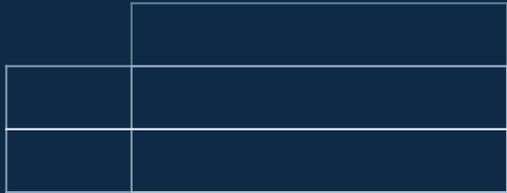
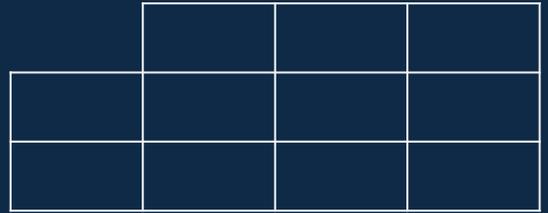
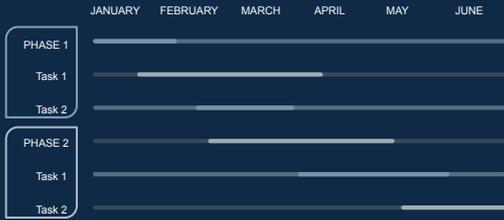
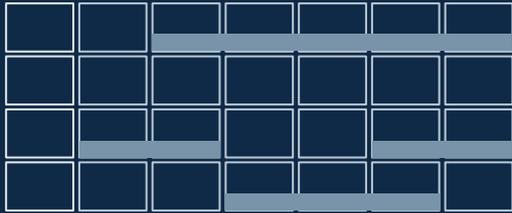
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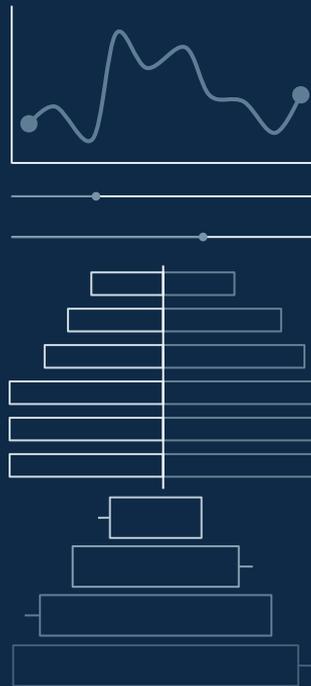
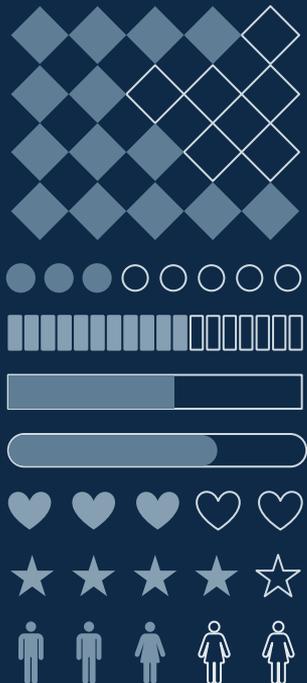
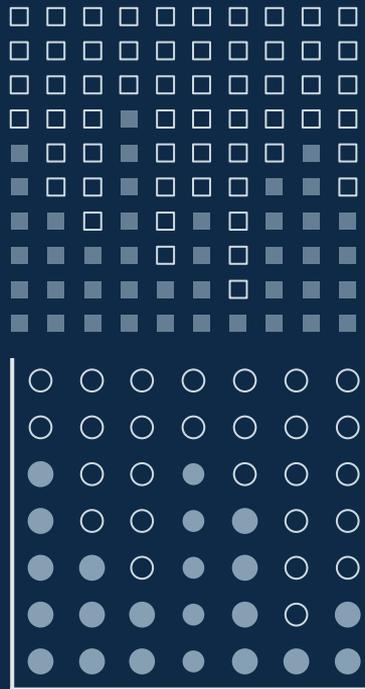












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You can **change the stroke and fill color**; just select the icon and click on the **paint bucket/pen**.

In Google Slides, you can also use **Flaticon's extension**, allowing you to customize and add even more icons.

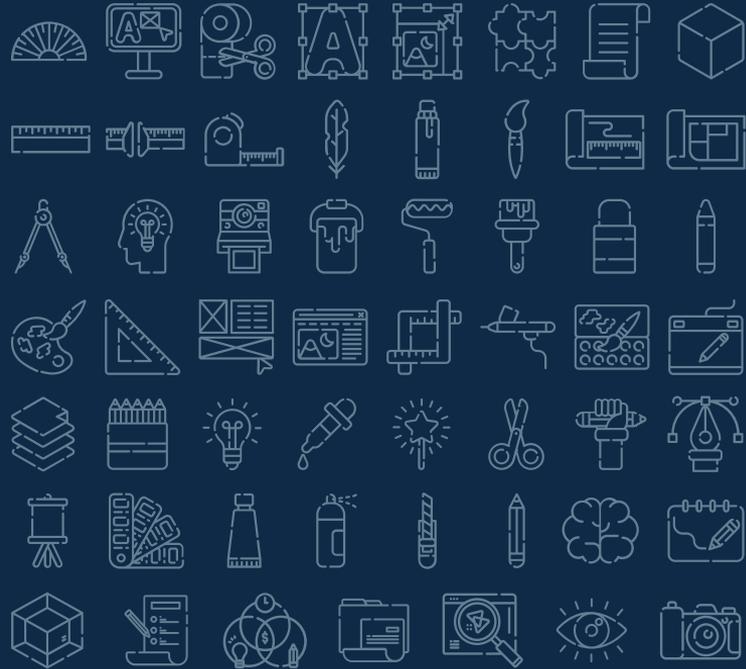








# Creative Process Icons



# Performing Arts Icons



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